Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)
	)
Numbering Resource Optimization	)CC Docket No. 99-200
	)

REPLY COMMENTS OF APCO and NENA

The Association of Public-Safety Communications Officials-International, Inc. (APCO) and the National Emergency Number Association (NENA) hereby submit Reply Comments on the above-captioned Notice of Proposed Rulemaking.

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I. SUMMARY

1.) APCO and NENA are submitting combined reply comments in the captioned proceeding concerning the important needs of emergency services and public safety (1) to identify the wireline or wireless local service provider to a local phone number and (2) to have a 24 hour, 7 days a week contact phone number of that provider for emergency situations.

2.) The two organizations believe it is essential to have a consistent nationwide long term solution so that emergency service and public safety communications, along with federal, state and local law enforcement, are not adversely affected in the areas of phone number identification to a local service provider and emergency contacting of a local service provider.

3.) The effects of LNP, number pooling, rate center consolidation, area code overlays and splits, combined with the increasing number of local service providers in many areas of the country and the entry of more wireless providers into the local market, are and will make it increasingly difficult for emergency services and public safety to quickly and accurately respond in certain instances, including life-threatening incidences.

4.) A short-term solution for identifying the local service provider of a phone number that has been "ported," is currently provided by Lockheed Martin CIS, under the direction and temporary funding of the regional LLCs (Limited Liability Corporations).

5.) We strongly believe that the system should be enhanced and the FCC should resolve funding issues based on industry cost recovery mechanisms in place and being considered for LNP and number pooling.

6.) We commend the FCC for soliciting information regarding 9-1-1, emergency services and public safety and any potential adverse effects on them found in the various number resource optimization methods. We believe this subject is of critical importance to our emergency service and public safety membership.

II. INTRODUCTION

7.) APCO and NENA are international organizations, which include in their membership, several thousand emergency services and public safety communication representatives in the United States. These include members from 9-1-1 systems and PSAPs (public safety answering points), fire and

medical emergency service communications, and local, state and federal law enforcement and public safety communications.

8.) NENA also includes in its membership representatives from many of the local service providers in the country including those directly involved in enhanced 9-1-1 address and routing databases.

III. OVERVIEW

9.) Comments filed by TX-ACSEC (Texas Advisory Commission on State Emergency Communications) and INENA (Illinois chapter of NENA) extensively address the issues. They refer to the Lockheed Martin CIS IVR (interactive voice response unit) in place currently for local phone numbers involved in LNP (long term or local number portability) in all seven LLC regions of the country and, where applicable, number pooling, currently in Illinois and New York.

10.) We concur with those comments and the need for a consistent nationwide permanent solution including its funding. Without it, emergency service and public safety agencies may be delayed in or halted from executing critical functions necessary to provide the appropriate responses in incidences involving life, health, and property safety.

11.) Our two organizations have formed a combined committee to assist us in regulatory issues involving 9-1-1, emergency services, and public safety with LNP, and specifically, the above mentioned IVR. The six members of this special group include people from the 9-1-1 government side (users) who have been involved in the rate center consolidations in Colorado, Minnesota and Texas, LNP introduction and later number pooling in Illinois, and wireless local service in Tennessee. The additional member is a person who has been involved in national 9-1-1 database standards setting concerning LNP since late 1996, and subsequently with related number pooling issues. The committee member from Illinois has taken part in various Midwest Region LNP and number pooling committees since November 1996. He has also taken part in national IVR-related meetings, involving telephone industry security personnel, national (FBI) and local law enforcement people and others, since mid 1997.

12.) They have extensively reviewed the comments filed by the two above-mentioned organizations from Illinois and Texas and have offered additional suggestions to be included in these reply comments.

IV. What is the IVR?

13.) The IVR (actually, a Lockheed Martin CIS interactive voice response unit and related hardware/software) is a unit that allows a database to be queried through data entered on a telephone keypad, with the caller following directions from a computerized voice menu.

14.) The database queried is a mirror image of each region's local number portability database, maintained by Lockheed Martin CIS. The country is divided into seven regions for LNP, using the RBOC state borders that were in existence at the time developed.

15.) The database includes all local phone numbers in that region that have been "ported," meaning that the customer has changed local service providers and kept her/his phone number. It also includes with each phone number, a pointer to the correct local service provider's switch.

16.) The data entered on the keypad includes the numeric password of the caller and the 10 digit local phone number for which information is being sought.

17.) The data entered on the telephone keypad causes a query to the database. The caller then hears an audio response advising if the number is in the LNP database or not. If it is there, the response includes the business name of the local service provider and if available, a 24 hour, 7 day a week number to reach that provider (this latter data taken from a data table also stored on the system).

18.) With the advent of pooling trials in Illinois and New York, the databases in those two regions also includes all phone numbers, which are involved in thousand block number pooling. This is the releasing of local phone numbers to local service providers in groups of 1000, NXX-X, rather than the traditional 10,000, NXX.

19.) Also done as part of the Illinois number pooling trial has been contaminated thousand block number pooling. This involves utilizing thousand blocks (NXX-Xs) in which the original code holder has already assigned up to 100 of the phone numbers. In this instance, the original code holder keeps the assigned numbers using a "porting" technique and the remaining 900 plus numbers are assigned to another local service provider for its future use.

20.) A phone number query through the IVR will also give a positive response if the number is in either group mentioned in paragraph 17.

21.) In areas that have LNP, there are very often several local service providers. These can be as many as 20 facilities-based companies and that total may climb to near 40, in the next several months.

V. Why is IVR needed

22.) With LNP and number pooling, the NXX no longer is a reliable local service provider ownership identifier. While the LNP nationwide numbers have recently only exceeded 2.5 million, trends in recent months have shown significant increases.

23.) If number pooling extends significantly beyond the limited areas it has been tested in to other states, since it is an excellent number resource optimization method, the total of local phone numbers involved may skyrocket.

24.) 9-1-1 systems and PSAPs must be able to contact a local service provider to determine an address for a phone number in some instances involving lack of address information ("no record found" response from the 9-1-1 address database).

25.) Emergency service agencies (which dispatch fire and/or ambulance resources and may or may not be a 9-1-1 PSAP) need to contact the correct local service provider to determine an address for a phone number, when receiving a second party report of an emergency, and the caller knows the phone number of the potential emergency site but not the address.

26.) Public safety/law enforcement agencies (which dispatch public safety/law enforcement resources and may or may not be a 9-1-1 PSAP site) need to contact the correct local service provider to interrupt or take over a specific phone line in the event of an emergency, such as a hostage taking and/or barricaded subject.

27.) Local, state and federal law enforcement agencies need to know which local service provider business name to place on court orders and subpoenas when seeking court-ordered wire taps or seeking customer phone record data.

28.) 9-1-1 database service provider personnel need to know which local service provider to contact to correct errors in address records submitted to them by the several local service providers in the areas they are responsible for. (This has been the subject of a letter supporting the IVR and sent to the various LLCs by a NENA 9-1-1 LNP study group several months ago, which includes in its membership, representatives from more than 30 local service providers, including all RBOCs.)

29.) Without IVR access for 9-1-1 database service providers, errors in customer 9-1-1 address records may not be corrected as quickly as possible and so 9-1-1 PSAPs will place an increased demand on it, due to 9-1-1 address database responses of "no record found."

30.) It should be pointed out that when a positive 9-1-1 address response appears on a call taker's screen in an area with LNP, the company identification of the phone number's local service provider can be displayed. This is all part of the many standards' changes worked in NENA's 9-1-1 LNP study group and other committees to lessen any negative impact from LNP on enhanced 9-1-1 systems.

VI. Development of IVR

31.) In February 1997, the IVR concept was first publicly discussed in Midwest Region LNP committees, including operations and a specially established 9-1-1 subcommittee.

32.) The potential setback to law enforcement (inability to identify a local service provider by the prefix or NXX of a phone number) in the upcoming LNP environment was the first problem identified that the IVR would solve.

33.) The other local service identification problems mentioned earlier in this document were identified during subsequent meetings and discussions. All appeared solvable through the proposed IVR solution.

34.) The Midwest Region LLC (Limited Liability Corporation) authorized Lockheed Martin CIS to proceed with establishing a price quote for what became known as statement of work 6, development of an IVR for 9-1-1, emergency services and public safety/law enforcement.

35.) The Midwest Region LLC subsequently approved the funding and authorized Lockheed Martin to proceed with establishing the IVR. The funding only covers the first three years, with the LLC expecting public safety and 9-1-1 agencies to have developed a permanent funding mechanism by the end of that time.

36.) Not covered in the funding was the administration/registration involved with the IVR. Public safety/law enforcement, emergency services agencies, and 9-1-1 systems/PSAPs can register for the service either by calling a Lockheed Martin CIS Chicago phone number or by submitting an application via a special number pooling web page on the Internet.

37.) Lockheed Martin has agreed to provide these administration/registration services free of charge to the appropriate agencies, while a permanent funding

mechanism is developed. Following an agency's application submission by phone or Internet, Lockheed personnel call the agency back a few days later (after verifying authenticity) to provide the numeric password for that agency, the phone number to call (currently toll free but subject to change to long distance for funding reasons), and directions on how to use the IVR system.

38.) The other administrative service provided for free at this time by Lockheed Martin CIS is the building of a local service provider phone number table for each of the seven U.S. regions. The phone number is supposed to be available 24 hours a day, seven days a week and have personnel who can handle or transfer calls requiring security services, such as phone number addresses, phone interrupts and phone line takeovers.

39.) This has apparently been a difficult task for Lockheed Martin CIS. It appears there is a lack of consistency from state to state regarding any regulations or laws requiring a local service provider to have such a phone number. Some states require it for 9-1-1 purposes, others for both 9-1-1 and law enforcement purposes, and others have no requirements at all.

40.) In early August 1999, the IVR system was made available to the final three regions of the U.S. following their LLCs' approval. It is available throughout the country under the same constraints as it had when it started in the Midwest. It is temporarily funded by the LLCs. Lockheed Martin CIS provides administration/registration free for now. It only includes local phone numbers that have been "ported" through LNP methods, except in the cases of Illinois and New York, where pooled number ranges are also included.

VII. IVR enhancements/changes

41.) Even prior to the basic IVR activation in the Midwest Region, law enforcement and 9-1-1 participants in the LNP process were considering enhancements that were needed.

42.) The three major enhancements included (1) a faster method of identifying the local service provider to a phone number, (2) a method of identifying that relationship to a local phone number whether it was "ported" or not, and (3) an 18 month history of a phone number's porting activity.

43.) The faster method was needed because of the potentially life-threatening, emergency nature of the incidences requiring IVR use. The lack of an address for a 9-1-1 call with no voice contact, must be dealt with quickly, since many involve medical, fire and emergency law enforcement incidences, including domestic violence occurring, all of which demand an immediate response by emergency services and public safety.

44.) The faster method was also needed because of public safety/law enforcement emergency calls such as hostage-taking and barricaded subjects which can be better handled the quicker the agency can either interrupt appropriate phone lines or take them over completely.

45.) In the LNP areas served by the IVR, the numbers of phones involved are still relatively small. Also, as the FCC has questioned, the number of phones involved in local phone service competition is still relatively low, on a percentage basis to the total in any urban area. For instance in the Denver metro area, there are 24 certified local service providers. The RBOC has 97.2 per cent of the wireline phone lines, with the other 23 competitors having the remaining 2.8 per cent.

46.) So, the first call by emergency services and public safety personnel will be to the incumbent local service provider (often the RBOC). If that company has no record, the next call will be to the IVR system, which requires the keying in of several numbers (numeric password, menu choices, and at least one 10-digit local phone number) before receiving a response. In the event of a life-threatening health problem or a police emergency such as domestic violence, this becomes dangerously lengthy.

47.) The recommended enhancements for speeding up response were (1) to link the IVR system with the national law enforcement computer system (NLETS) so that public safety agencies (which are often also 9-1-1 PSAPs) could inquire on a phone number just as quickly as entering a license plate, receiving a response back in just a few seconds, and (2) to link the IVR system to a secure Internet page so that emergency service agencies (such as fire and medical centers, which also may be 9-1-1 PSAPs) could have similar access. Non-law enforcement agencies are not allowed access to the NLETS system understandably for security reasons.

48.) Another recommendation that has been made through our APCO/NENA combined committee, and one that is being developed for data standards in a NENA work group, is to allow a link between the IVR and 9-1-1 address database systems, so that when an address "no record found" screen is returned to a 9-1-1 call taker regarding an incoming emergency call, the screen will also show the local service provider for that number and its 7/24 phone number, to be used to get an address in case the call involves no voice contact.

49.) The second enhancement suggested, and strongly recommended by our combined APCO/NENA committee, is to include a local service provider identification response for any local phone number being inquired upon.

50.) When this idea was originally being considered, Lockheed Martin CIS was only involved in LNP phone number work. Since that time, it has taken on greatly increased national responsibilities that were once handled by Bellcore and the RBOCs.

51.) If a phone number inquiry resulted in no record being found in the LNP/pooling database, it could then inquire from an electronic equivalent of the LERG for the local service provider which was the code holder of the NXX.

52.) With the advent of LNP, and the lure of the local service provider marketplace, urban areas have seen substantial growth in the number of businesses entering that market. In the Chicago metro area, there are at least 15 facilities-based local service providers, and five wireless carriers. In the Dallas metro area, there are at least 18 facilities-based local service providers. In the Denver metro area, there are 24 certified wireline local service providers and six wireless carriers.

53.) 9-1-1 PSAPs, emergency services agencies, and public safety/law enforcement agencies often do not even know the names of all these local service providers in their area. And if they do, the chances are slim to none that they know all the NXXs assigned to each provider.

54.) With the increasing entry of wireless carriers into the local marketplace, and their LNP implementation date on the horizon, along with potential number pooling, the wireless service provider NXX code holding information will also be needed.

55.) In wireless 9-1-1 phase I, 9-1-1 PSAPs are to receive the phone number of the caller. They also receive the tower site information, however, the carrier with the tower site may not be the carrier of the caller.

56.) In emergency 9-1-1 calls involving wireless phones, there will definitely be emergency situations requiring contact with the wireless provider of the caller. The proposed enhancement to the IVR system would greatly assist. The CTIA web page has statistics that show approximately 3 per cent of the wireless phones in use today are by customers who have given up their wireline phones for wireless, as their local (home/business) phone service.

57.) The final IVR enhancement that has been sought is the inclusion of 18 months of porting history for a local phone number. This has basically been determined to be of importance to local, state and national law enforcement in investigations.

58.) A wireline customer in an LNP capable area can change local service providers within 72 hours. If the wireless industry proposed standards are followed, they will permit a customer to port within 2 ½ hours.

59.) While our organizations are definitely not law enforcement investigation experts, we do realize that major criminal cases can require local phone records of suspects from a prior time period.

60.) Local service providers are required to keep such records for 18 months. Without some historical LNP data for that same time period through the IVR system, law enforcement investigators may be slowed considerably since a local phone number could have passed between 15 to 40 local service providers multiple times during the one and one-half year time frame.

VIII. IVR Funding

61.) The long term funding of the current basic Lockheed Martin IVR system and the recommended and necessary enhancements to it, should be funded through industry cost allocation and absorption mechanisms in place today for LNP and being worked out for number pooling.

62.) In CC Docket 95-116, Telephone Number Portability, the FCC stated that any LNP procedures should include "the ability to support emergency services, i.e., 911 and enhanced 911 (E911) services."

63.) In the same docket, in section 52.3. Deployment of Long-Term Database Methods for Number Portability by LECs, it is stated that "all local exchange carriers (LECs) must provide number portability in compliance with the following performance criteria: (1) supports network services, features, and capabilities existing at the time number portability is implemented, including but not limited to emergency services, CLASS features, operator and directory assistance services, and intercept capabilities;"

64.) The current basic IVR and the enhancements proposed involve costs directly or indirectly related to the providing of LNP (and subsequently, number pooling). They simply allow 9-1-1 systems/PSAPs, emergency service (fire/medical/law enforcement) agencies to perform their work without any degradation of service or speed, compared to the same work prior to LNP and number pooling.

65.) Prior to LNP being considered, there was virtually no competition in the local service provider arena. During the several months that LNP was being developed and refined, facilities-based local service providers began to build and compete in one area of the country after the other.

66.) As wireless carriers considered their FCC mandate to enter the LNP arena and began developing proposed standards to do so, some of them have begun local advertising in parts of the country, seeking or preparing people to change their local phone service from wireline to wireless. Even without LNP in place, they are being successful in some places.

67.) The same LNP First Report and Order and Further Notice of Proposed Rulemaking, CC Docket 95-116, which we have already quoted in these reply comments, stated quite emphatically that for the purposes of the LNP order, wireless carriers were to be considered local service providers, not a different kind of service, and therefore, they were subject to the performance criteria listed above in paragraphs 59 and 60.

68.) In addition to considering the recommendations for long term funding of IVR and its enhancements, the FCC should also use its regulatory authority to mandate that local service providers, wireline and wireless, have a 24 hour, 7 day a week phone number to personnel who can provide or transfer to those who can provide the appropriate emergency information and services needed by 9-1-1 systems/PSAPs, emergency services agencies, and public safety/law enforcement.

69.) The same companies should also be required, at least until an enhanced IVR can be funded and readily available, to provide that phone number and the NXX codes it holds, to all the appropriate 9-1-1 systems/PSAPs, emergency services agencies, and local, state and federal law enforcement agencies that may have jurisdiction within the NXX rate center or home serving area.

70.) As the FCC considers the various number resource optimization methods listed in this docket, including rate center consolidation, thousand block number pooling, individual number pooling, area code overlays/splits, service area code overlays, and others, APCO and NENA emphasize that virtually all the methods create difficulties regarding local service provider/phone number matching. However, the FCC can resolve some of these difficulties through rulemaking in support of the basic IVR in place and the enhancements we have recommended.

IX. SUMMARY OF RECOMMENDATIONS

71.) IVR should be enhanced by (1) linking the IVR system with the national law enforcement computer system (NLETS) so that public safety agencies (which are often also 9-1-1 PSAPs) could inquire on a phone number just as quickly as entering a license plate, receiving a response back in just a few seconds, and (2) linking the IVR system to a secure Internet page so that emergency service agencies (such as fire and medical centers, which also may be 9-1-1 PSAPs)

could have similar access. Non-law enforcement agencies are not allowed access to the NLETS system understandably for security reasons.

72.) Allow a link between the IVR and 9-1-1 address database systems, so that when an address "no record found" screen is returned to a 9-1-1 call taker regarding an incoming emergency call, the screen will also show the local service provider for that number and its 7/24 phone number, to be used to get an address in case the call involves no voice contact.

73.) Include a local service provider identification response for any local phone number being inquired upon.

74.) Include 18 months of porting history for a local phone number.

75.) The long term funding of the current basic Lockheed Martin IVR system and the recommended and necessary enhancements to it, should be funded through industry cost allocation and absorption mechanisms in place today for LNP and being worked out for number pooling.

76.) The FCC should mandate that local service providers, wireline and wireless, have a 24 hour, 7 day a week phone number to personnel who can provide or transfer to those who can provide the appropriate emergency information and services needed by 9-1-1 systems/PSAPs, emergency services agencies, and public safety/law enforcement. Service provides should also be required, at least until an enhanced IVR can be funded and readily available, to provide that phone number and the NXX codes it holds to all the appropriate 9-1-1 systems/PSAPs, emergency services agencies, and local, state and federal law enforcement agencies that may have jurisdiction within the NXX rate center or home serving area.

Respectfully submitted,

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